

**REMARKS**

Reconsideration of this application is respectfully requested.

Claims 1-4 and 6-10 are pending in the application, with Claims 1, 3 and 4 being the independent claims.

The Examiner rejected Claims 1-4 and 6-10 under 35 U.S.C. §101 as being directed toward non-statutory subject matter in the form of an algorithm and a signal.

Claim 1 recites a method of training a neural network to perform decoding of a time-varying signal comprising a sequence of input symbols, which is coded by a convolutional coder such that each coded output symbol depends on more than one input symbol. A plurality of successive input symbols are provided to the neural network and to the convolutional coder. The network outputs are compared with the input signals. Parameters of the network are adapted to reduce differences there between. The input symbol is transmitted together with the plurality of output symbols to a communications network decoder.

Claim 1 has been amended to more clearly recite statutory subject matter. More specifically, Claim 1 has been amended to recite that the providing, comparing and adapting steps are repeated until the differences are reduced below a threshold and the neural network substantially operates as a decoder of the convolutional encoder.

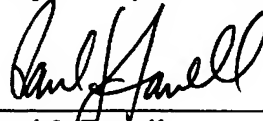
The Examiner also rejected independent Claims 3 and 4 under 35 U.S.C. §101. Claims 3 and 4 have been amended to recite that at least one of the decoded symbols corresponding to the input symbol and the plurality of output symbols is output from the network.

Regarding Claims 2 and 6-10, while not conceding the patentability of the dependent claims, *per se*, we believe Claims 2 and 6-10 are also allowable for at least the above reasons.

Accordingly, we believe that Claims 1-4 and 6-10 are allowable, and the rejection under 35 U.S.C. §101 should be withdrawn.

Accordingly, all of the claims pending in the Application, namely, Claims 1-4 and 6-10 are believed to be in condition for allowance. Should the Examiner believe that a telephone conference or personal interview would facilitate resolution of any remaining matters, the Examiner may contact Applicant's attorney at the number given below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Paul J. Farrell", written over a horizontal line.

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